

## **CLAIMS**

I claim:

- 1     1.     A method for making combustible products from recyclable materials comprising:  
2             blending feedstock, wherein said feedstock is selected substantially from the  
3     group consisting of thermoplastic material, cellulosic fibers and combinations thereof;  
4             inputting said blended feedstock into a grinder for the purpose of reducing the size  
5     of said blended feedstock; and  
6             compressing and extruding said reduced blended feedstock through a cuber so as  
7     to create combustible products.
- 1     2.     The method of Claim 1 wherein said grinder operates at a torque of between about  
2     18,000 and about 20,000 ft-lbs of torque per motor shaft.
- 1     3.     The method of Claim 1 wherein said grinder operates at a speed of between about  
2     75 to about 80 rpms.
- 1     4.     The method of Claim 1 wherein said thermoplastic material is selected from the  
2     group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene-  
3     styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations  
4     thereof.
- 1     5.     The method of Claim 1 wherein said feedstock is selected from the group  
2     consisting of byproducts from the production of disposable diapers, byproducts from the  
3     production of sanitary pads, byproducts from the production of adhesive liners,  
4     byproducts from the production of hospital gowns and combinations thereof.
- 1     6.     The method of Claim 1 wherein said feedstock is selected from the group  
2     consisting of waste from the production of disposable diapers, waste from the production

- 3 of sanitary pads, waste from the production of adhesive liners, waste from the production
- 4 of hospital gowns and combinations thereof.

- 1     7.     A method for preparing combustible materials from thermoplastic material and  
2     cellulosic fibers comprising:  
3             selecting feedstock selected substantially from the group consisting of  
4     thermoplastic material, cellulosic fibers and combinations thereof  
5             feeding said feedstock through a size reduction apparatus, wherein said size  
6     reduction apparatus operates at a torque of between about 18,000 and about 20,000 ft-lbs  
7     of torque per motor shaft; and  
8             feeding said reduced feedstock through a cuber, including forcing said feedstock  
9     through die holes to form combustible products.
- 1     8.     The method of Claim 7 wherein said size reduction apparatus operates at a speed  
2     of between about 75 and about 80 rpms.
- 1     9.     The method of Claim 7 wherein said thermoplastic material is selected from the  
2     group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene-  
3     styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations  
4     thereof.
- 1     10.    The method of Claim 7 wherein said feedstock is selected from the group  
2     consisting of byproducts from the production of disposable diapers, byproducts from the  
3     production of sanitary pads, byproducts from the production of adhesive liners,  
4     byproducts from the production of hospital gowns and combinations thereof.
- 1     11.    The method of Claim 7 wherein said feedstock is selected from the group  
2     consisting of waste from the production of disposable diapers, waste from the production  
3     of sanitary pads, waste from the production of adhesive liners, waste from the production  
4     of hospital gowns and combinations thereof.

- 1    12.    A method for manufacturing a combustible product comprising:  
2            supplying feedstock into a grinder, wherein said feedstock is selected substantially  
3    from the group consisting of thermoplastic material, cellulosic fibers and combinations  
4    thereof;  
5            grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-  
6    lbs of torque per motor shaft; and  
7            feeding said ground feedstock through a cuber to form combustible products.
- 1    13.    The method of Claim 12 wherein said grinder operates at a speed of between  
2    about 75 and about 80 rpms.
- 1    14.    The method of Claim 12 wherein said thermoplastic material is selected from the  
2    group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene-  
3    styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations  
4    thereof.
- 1    15.    The method of Claim 12 wherein said feedstock is selected from the group  
2    consisting of byproducts from the production of disposable diapers, byproducts from the  
3    production of sanitary pads, byproducts from the production of adhesive liners,  
4    byproducts from the production of hospital gowns and combinations thereof.
- 1    16.    The method of Claim 12 wherein said feedstock is selected from the group  
2    consisting of waste from the production of disposable diapers, waste from the production  
3    of sanitary pads, waste from the production of adhesive liners, waste from the production  
4    of hospital gowns and combinations thereof.

- 1    17.    A method for manufacturing a combustible product comprising:  
2            supplying feedstock into a grinder, wherein said feedstock is selected substantially  
3    from the group consisting of thermoplastic material, cellulosic fibers and combinations  
4    thereof;  
5            grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-  
6    lbs of torque per motor shaft; and  
7            feeding said ground feedstock through a cuber to form combustible products.
- 1    18.    The method of Claim 17 wherein said grinder operates at a speed of between  
2    about 75 and about 80 rpms.
- 1    19.    The method of Claim 17 wherein said thermoplastic material is selected from the  
2    group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene-  
3    styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations  
4    thereof.
- 1    20.    The method of Claim 17 wherein said feedstock is selected from the group  
2    consisting of byproducts from the production of disposable diapers, byproducts from the  
3    production of sanitary pads, byproducts from the production of adhesive liners,  
4    byproducts from the production of hospital gowns and combinations thereof.
- 1    21.    The method of Claim 17 wherein said feedstock is selected from the group  
2    consisting of waste from the production of disposable diapers, waste from the production  
3    of sanitary pads, waste from the production of adhesive liners, waste from the production  
4    of hospital gowns and combinations thereof.

1    22.    A system for manufacturing a combustible product comprising:  
2            a grinder for grinding feedstock, wherein said feedstock is selected substantially  
3    from the group consisting of thermoplastic material, cellulosic fibers and combinations  
4    thereof and said grinder operates at a torque of between about 18,000 and about 20,000 ft-  
5    lbs of torque per motor shaft;  
6            a cuber for shaping said ground feedstock into predetermined shapes; and  
7            a method of feeding said feedstock through said grinder and said cuber to form  
8    combustible products.

1    23.    The system of Claim 22 wherein said grinder operates at a speed of between about  
2    75 and about 80 rpms.

1    24.    The system of Claim 22 wherein said thermoplastic material is selected from the  
2    group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene-  
3    styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations  
4    thereof.

1    25.    The system of Claim 22 wherein said feedstock is selected from the group  
2    consisting of byproducts from the production of disposable diapers, byproducts from the  
3    production of sanitary pads, byproducts from the production of adhesive liners,  
4    byproducts from the production of hospital gowns and combinations thereof.

1    26.    The system of Claim 22 wherein said feedstock is selected from the group  
2    consisting of waste from the production of disposable diapers, waste from the production  
3    of sanitary pads, waste from the production of adhesive liners, waste from the production  
4    of hospital gowns and combinations thereof.

- 1    27.    A combustible product, wherein said combustible product has been made by the  
2    process of:
- 3            supplying feedstock into a grinder, wherein said feedstock is selected substantially  
4    from the group consisting of thermoplastic material, cellulosic fibers and combinations  
5    thereof;
- 6            grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-  
7    lbs of torque per motor shaft; and
- 8            feeding said ground feedstock through a cuber to form combustible products.
- 1    28.    The product of Claim 27 wherein said feedstock is ground at between about 75  
2    and about 80 rpms.
- 1    29.    The product of Claim 27 wherein the thermoplastic material is selected from the  
2    group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene-  
3    styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations  
4    thereof.

1     30.     A method for manufacturing a combustible product comprising:  
2             supplying feedstock into a grinder, wherein said feedstock is selected substantially  
3     from the group consisting of thermoplastic material, cellulosic fibers and combinations  
4     thereof;  
5             grinding said feedstock at a torque of between about 18,000 and about 20,000 ft-  
6     lbs of torque per motor shaft;  
7             feeding said ground feedstock through a cuber to form combustible products.  
8             monitoring the operational characteristics of said grinder and said cuber using a  
9     software application, wherein said characteristics can be monitored and controlled using  
10    said software.

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1     31.     The method of Claim 30 wherein said operational characteristics are selected from  
2     the group consisting of amperage draw of the grinder, the amperage draw of the cuber,  
3     the speed of the grinder the heat generated in the grinder, the heat generated in the cuber,  
4     the speed of the grinder; the speed of the cuber, the pressure required to perform the  
5     cubing operation.

6     32.     The product of Claim 30 wherein said feedstock is ground at between about 75  
7     and about 80 rpms.

1     33.     The product of Claim 30 wherein the thermoplastic material is selected from the  
2     group consisting of polyethylene, polypropylene, polystyrene, acrylonitrile-butadiene-  
3     styrene, acetal copolymer, acetal homopolymer, acrylic, polybutylene and combinations  
4     thereof.